



PATENT
Attorney Docket No. UPITT-08296

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Samir F. Saba

Serial No.: 10/717,248

Filed: 11/19/03

Entitled:

**Device And Method To Discriminate Between
Supraventricular Tachycardias And Ventricular
Arrhythmias**

Group No.: 3766

Examiner: Layno, C.

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)(1)(i)(A)

I hereby certify that this correspondence (along with any referred to as being attached or enclosed) is, on the date shown below, being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA, 22313-1450.

Dated: October 23, 2006

By:

Christopher J. Collins

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir or Madam:

The citations listed below, copies attached, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

The following printed publications are referred to in the body of the specification:

- U.S. Patent No. 5,143,089 to Alt;
- U.S. Patent No. 6,076,014 to Alt;
- Barold *et al.*, "Prospective evaluation of new and old criteria to discriminate between supraventricular and ventricular tachycardia in implantable defibrillators," *Pacing Clin Electrophysiol.*, 21:1347-1355 (1998);
- Buxton *et al.*, "Current approaches to evaluation and management of patients with ventricular arrhythmias," *Med. Health R I*, 84(2):58-62 (2001)¹;
- Finelli *et al.*, "Effects of increased heart rate and sympathetic tone on intraventricular electrogram morphology," *Am. J Cardiol.* 68:1321-1328 (1991);

10/25/2006 MGE BREM1 00000025 10717248

02 FC:1806

180.00 DP

¹We were unable to obtain this reference, but if the examiner requests a copy we will attempt to obtain it.

- Gold *et al.*, "A new defibrillator discrimination algorithm utilizing electrogram morphology analysis," *Pacing Clin Electrophysiol.* 22:179-182 (1999);
- Lampert *et al.*, "Management of arrhythmias," *Clin Geriatr Med.* 16(3):593-618 (2000);
- McAlister *et al.*, "Atrial electrogram analysis: antegrade versus retrograde," *Pace* 11:1703-1707 (1988);
- Pannizo *et al.*, "Discrimination of antegrade and retrograde atrial depolarization by electrogram analysis," *Am. Heart J.* 112:780-786 (1986);
- Ross *et al.*, "The effect of exercise on the atrial electrogram voltage in young patients," *PACE*, 14:2092-2097 (1991);
- Schaumann *et al.*, "Enhanced detection criteria in implantable cardioverter-defibrillator to avoid inappropriate therapy," *Am J Cardiol.*, 78:42-50 (1996);
- Tanaka S., "An overview of fifth-generation implantable cardioverter defibrillators," *Ann Thorac Cardiovasc Surg.*, 4:303-311 (1998)²;
- Thompson *et al.*, "Ventriculoatrial conduction metrics for classification of ventricular tachycardia with 1:1 retrograde conduction in dual chamber sensing implantable cardioverter defibrillators," *J Electrocardiol.*, 31: 152-156 (1988);
- Timmis *et al.*, "Discrimination of antegrade from retrograde atrial electrograms for physiologic pacing," *PACE* 11:130-140 (1988);
- Throne *et al.*, "Discrimination of retrograde from antegrade atrial activation using intracardiac electrogram waveform analysis," *Pacing Clin Electrophysiol.*, 12:1622-1630 (1989);
- Wainwright *et al.*, "Ideal atrial lead positioning to detect retrograde atrial depolarization by digitization and slope analysis of the atrial electrogram," *PACE* 7:1152-1158 (1984); and
- Woodroffe M., Probability with applications, McGraw-Hill, New York pp. 229-239 (1975).

Applicant has become aware of the following printed publications through the International Search Report issued November 18, 2004 in the related PCT application WO 2004/045385 A2:

- U.S. Patent No. 5,562,708 to Combs *et al.*;
- U.S. Patent No. 5,383,910 to den Dulk; and
- U.S. Patent No. 5,476,482 to Lu.

²We were unable to obtain this reference, but if the examiner requests a copy we will attempt to obtain it.

Applicant has become aware of the following printed publications which may be material to the examination of this application:

- U.S. Patent No. 5,411,530 to Akhtar;
- Saba *et al.*, "Testing of a new real-time computer algorithm as an aid to pace mapping and entertainment with concealed fusion," *Am. J. Cardiol.* 87:20-24 (2001); and
- Saba *et al.*, "Use of correlation waveform analysis in discrimination between anterograde and retrograde atrial electrograms during ventricular tachycardia," *J. Cardiovascular Electrophysiology*, 12(2):145-149 (2001).

This Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one or more of these citations constitutes prior art.

Dated: October 23, 2006


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|  FORM PTO-1449 (Modified) | | | | | U.S. Department of Commerce Patent and Trademark Office | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------|------------------------------------------------------------|----------|------------------------|--|----------------------|--|
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT <small>(List Several Items If Necessary)</small> (37 CFR § 1.98(b)) | | | | | Attorney Docket No.: UPITT-08296 | | Serial No.: 10/717,248 | | | |
| | | | | | Applicant: Samir F. Saba | | Filing Date: 11/19/03 | | Group Art Unit: 3766 | |
| | | | | | U.S. PATENT DOCUMENTS | | | | | |
| Examiner Initials | Cite No. | Serial / Patent Number | Issue Date | Applicant / Patente | Class | Subclass | Filing Date | | | |
| | 1 | 5,143,089 | 09-01-1992 | Alt | 607 | 121 | 05-01-1990 | | | |
| | 2 | 5,383,910 | 01-24-1995 | den Dulk | 607 | 14 | 02-19-1993 | | | |
| | 3 | 5,411,530 | 05-02-1995 | Akhtar | 607 | 14 | 11-13-1992 | | | |
| | 4 | 5,476,482 | 12-19-1995 | Lu | 607 | 9 | 04-12-1994 | | | |
| | 5 | 5,562,708 | 10-08-1996 | Combs <i>et al.</i> | 607 | 4 | 04-21-1994 | | | |
| | 6 | 6,076,014 | 06-13-2000 | Alt | 607 | 4 | 08-01-1997 | | | |
| OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication) | | | | | | | | | | |
| | 7 | Barold <i>et al.</i> , "Prospective evaluation of new and old criteria to discriminate between supraventricular and ventricular tachycardia in implantable defibrillators," <i>Pacing Clin Electrophysiol.</i> , 21:1347-1355 (1998) | | | | | | | | |
| | 8 | Finelli <i>et al.</i> , "Effects of increased heart rate and sympathetic tone on intraventricular electrogram morphology," <i>Am. J Cardiol.</i> 68:1321-1328 (1991) | | | | | | | | |
| | 9 | Gold <i>et al.</i> , "A new defibrillator discrimination algorithm utilizing electrogram morphology analysis," <i>Pacing Clin Electrophysiol.</i> 22:179-182 (1999) | | | | | | | | |
| | 10 | Lampert <i>et al.</i> , "Management of arrhythmias," <i>Clin Geriatr Med.</i> , 16(3):593-618 (2000) | | | | | | | | |
| | 11 | McAlister <i>et al.</i> , "Atrial electrogram analysis: antegrade versus retrograde," <i>Pace</i> 11:1703-1707 (1988) | | | | | | | | |
| | 12 | Pannizo <i>et al.</i> , "Discrimination of antegrade and retrograde atrial depolarization by electrogram analysis," <i>Am. Heart J.</i> 112:780-786 (1986) | | | | | | | | |
| | 13 | Ross <i>et al.</i> , "The effect of exercise on the atrial electrogram voltage in young patients," <i>PACE</i> , 14:2092-2097 (1991) | | | | | | | | |
| | 14 | Saba <i>et al.</i> , "Testing of a new real-time computer algorithm as an aid to pace mapping and entertainment with concealed fusion," <i>Am. J. Cardiol.</i> 87:20-24 (2001) | | | | | | | | |
| | 15 | Saba <i>et al.</i> , "Use of correlation waveform analysis in discrimination between anterograde and retrograde atrial electrograms during ventricular tachycardia," <i>J. Cardiovascular Electrophysiology</i> , 12(2):145-149 (2001) | | | | | | | | |
| | 16 | Schaumann <i>et al.</i> , "Enhanced detection criteria in implantable cardioverter-defibrillator to avoid inappropriate therapy," <i>Am J Cardiol.</i> , 78:42-50 (1996) | | | | | | | | |
| | 17 | Thompson <i>et al.</i> , "Ventriculoatrial conduction metrics for classification of ventricular tachycardia with 1:1 retrograde conduction in dual chamber sensing implantable cardioverter defibrillators," <i>J Electrocardiol.</i> , 31: 152-156 (1988) | | | | | | | | |
| | 18 | Timmis <i>et al.</i> , "Discrimination of antegrade from retrograde atrial electrograms for physiologic pacing," <i>PACE</i> 11:130-140 (1988) | | | | | | | | |
| | 19 | Throne <i>et al.</i> , "Discrimination of retrograde from antegrade atrial activation using intracardiac electrogram waveform analysis," <i>Pacing Clin Electrophysiol.</i> , 12:1622-1630 (1989) | | | | | | | | |
| | 20 | Wainwright <i>et al.</i> , "Ideal atrial lead positioning to detect retrograde atrial depolarization by digitization and slope analysis of the atrial electrogram," <i>PACE</i> 7:1152-1158 (1984) | | | | | | | | |
| | 21 | Woodroffe M., <u>Probability with applications</u> , McGraw-Hill, New York pp. 229-239 (1975) | | | | | | | | |
| Examiner: | | | | Date Considered: | | | | | | |
| EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. | | | | | | | | | | |